

State of Alaska FY2003 Governor's Operating Budget

Department of Transportation/Public Facilities Highways and Aviation Budget Request Unit Budget Summary

Highways and Aviation Budget Request Unit

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BRU Mission

The mission is to maintain, safeguard and control the state's infrastructure system of highways, airports and harbors.

BRU Services Provided

- Winter snow and ice control including snow plowing, snow removal, sanding, anti-icing, avalanche control, snow fencing and culvert thawing.
- Summer maintenance including: grading, pothole patching, crack sealing, leveling of heaves and dips, brush clearing, sweeping, dust control, drainage cleaning and repair, fence and guardrail repair, bridge painting and repair, and sign maintenance.
- Road and airport lighting systems including: Maintenance of traffic signals, intersection and road illumination, harbor electrical service and lighting, and runway and taxiway lights.
- Roadside litter control and trash removal at rest areas, turnouts and campgrounds.
- Control access to State rights of way for driveways, access roads, signs and utilities.

BRU Goals and Strategies

- Maintain and operate State highways, airports and harbors in a manner that assures safe and efficient transportation of both people and freight.
- Cost effectively and properly maintain public infrastructure systems to prevent premature deterioration and costly repairs.
- Monitor and report highway and airport conditions to public in a timely manner.
- Continue the paving of gravel roads and preservation of existing asphalt roads throughout the state.
- Begin use of new Intelligent Transportation System technologies such as Road and Weather Information Systems to better maintain the highways.
- Develop and use a maintenance management system to better manage our resources and gauge our performance.
- Develop an apprentice program for highway and airport equipment operators to have skilled workers ready to replace the large number of retirees in the next few years.

Key BRU Issues for FY2002 – 2003

- A key issue continues to be how to protect Alaska's investment in its current and expanding transportation infrastructure. The State's investments in roads, airports, and harbors are eroding each year due to insufficient maintenance. As the transportation infrastructure continues to age, M&O is faced with ever-increasing list of deferred maintenance needs. Other demands include increases in the cost of labor, materials, electricity and fuel and the addition of new fees that must be paid to other state and federal agencies; and finally the increasing burden of new laws and regulations. The H&A budget has not kept up with these demands and is inadequate to sustain basic preventative maintenance of our infrastructure. Our list of deferred maintenance items is projected to be \$258.5 million for statewide H&A needs. Annual increases to the BRU necessary to preserve existing and new components are \$24 million. Adequate and stable funding is mandatory to properly maintain our infrastructure and provide a suitable level of service to the public.
- Airport security is now a major issue following the events of September 11. Requirements for security are changing to comply with FAA-mandated Emergency Amendments to airport security programs. Additional personnel are needed to perform mandated functions such as security management, inspection, law enforcement, access control, parking area and perimeter patrols, and administrative functions. Along with additional personnel, considerable costs will be incurred to provide remote parking areas, security fences, lighting equipment, access controls and additional security vehicles. The Aviation Security Act will help define Federal requirements for added security and specify whether federal funds will be available.
- Increased costs have been offset slightly through increased productivity and other efficiencies. They are offset to a larger extent by increased reliance on capital funds. General Funds for capital improvements have dwindled in recent years to insignificant levels. Highways and Aviation has made maximum use of federal highway funding to

achieve improvements in road surfaces (chip sealing), which decreases maintenance costs for the short term. These funds are limited to specific maintenance activities such as asphalt and bridge repair and are not available for routine activities such as guardrail repair or snow and ice control. Operating costs, however, have continued to increase and still outweigh the sum of our cost reducing efforts, the infusion of capital funds, and our operating revenues.

- The H&A workforce is aging and nearing retirement. Within the next five years over 30% of the H&A foreman, equipment operators and mechanics will be eligible for retirement. This is the front wave of baby boomers whose departure from the work force will leave a significant gap. There are not sufficient skilled employees within our ranks to fill these vacancies. Recruitment for these positions may also become a problem. Other states are currently unable to hire skilled personnel to fill their needs. The department previously had various grades of operators and mechanics from heavy duty to light duty and laborers. This allowed employees a natural progression as they acquired skills. During previous budget reductions, these lesser skilled positions were deleted to retain higher skilled operators and mechanics. The State must be proactive in planning for departure of skilled workforce so the level of service on our transportation system is not adversely impacted.
- Replace the maintenance stations at Chandalar, East Fork and Willow that were unsafe due to structural deficiencies. Temporary facilities are being used and funded with Emergency funds however they are insufficient to needs of properly maintaining equipment. Design efforts are underway but full funding is necessary to start construction this summer.

Major BRU Accomplishments in 2001

- Applied chip seal, hot mix, or high float asphalt to 206.7 lane miles of road.
- Covered 314 lane miles with crack seal.
- Cut approximately 1,066 centerline miles of brush and trees along our right-of-ways.
- Coordinated parts delivery with State Equipment Fleet at remote camps by using Maintenance and Operations employees to perform this service.
- The Adopt-a-Highway system continues to grow with new volunteer groups enthusiastically participating in clean up of selected segments of highways. A safety video has been developed. A Policies and Procedures Manual for Adopt-a-Highway programs is currently being developed.
- Paved approximately 45 lane miles of gravel roads.
- Coordinated with borough governments to "Pave and Transfer" small roads. Traded road maintenance responsibilities with local city and borough governments to more efficiently sand and plow snow, paint streets, and clean out storm drains.
- Federal CIP project funds were used to replace traffic signal heads with more electrically efficient LED heads. This conversion will save money in electric bills for the Anchorage, Mat-Su, and Kenai Peninsula Districts.
- Completed feasibility study to define a maintenance management system that will best meet the department's current and future needs.

Key Performance Measures for FY2003

Measure:

The number of miles of gravel roads that are surfaced with chip seal, hot mix, or high float asphalt for the first time, reported regionally.

Sec 149(b)(1) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

The number of lane miles of gravel road surfaced with chip seal, hot mix or high float asphalt for the first time during FY01 is as follows:

	by Highways & Aviation	by Construction	Total (lane miles)
Central Region	32	40	72
Northern Region	8	236.4	244.4
Southeast Region	5	10	15
TOTAL	45	286.4	331.4

Benchmark Comparisons:

We are unaware of any specific benchmark at this time. The number of miles of roads that are surfaced is dependent upon amount of funds budgeted through the Statewide Transportation Improvement Program (STIP).

Background and Strategies:

The Road Paving Program established in FY99 implements the Administration's goal of reducing maintenance costs and improving the quality of life for Alaskans by hard surfacing state owned/maintained Non National Highway System (NHS) gravel roads, as well as those NHS roads also identified under the STIP. The scope of this work represents limited shoulder work, drainage and other work related to preserving the road structure. This is an extremely important program and will provide great benefit to many Alaskans. The Department of Transportation and Public Facilities also benefits directly from this program through reduced maintenance costs. Roads are selected for this program based on cost, condition of the roads, and traffic levels.

Measure:

The percentage of highway and airport lane miles per full-time-equivalent employee compared to the average of member states of the Western Association of State Highway and Transportation Officials.

Sec 149(b)(2) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

Northern Region Maintenance and Operations, Highways and Aviation maintains highway and airport lane miles with 42.2 lane miles per full time equivalent position. Southeast Region averages 35.3 highway and airport lane miles per full time equivalent. And, Central Region M&O maintains highway and airport lane miles with an average of 37.0 lane-miles per FTE position.

Benchmark Comparisons:

Fifteen states average 29.3 lane miles per full time equivalent position (Data Source: OKDOT Survey, 1999 & 2001 results from 15 WASHTO States) as follows:

Arizona	29.89	
California	10.33	(1999)
Colorado	15.98	(1999)
Hawaii	8.86	(1999)
Idaho	29.50	
Montana	35.25	
Nevada	33.30	
New Mexico	30.39	
North Dakota	46.55	(1999)
Oklahoma	39.30	
Oregon	16.77	
South Dakota	42.86	
Texas	40.61	
Utah	41.59	
Washington	18.49	(1999) Average 29.31

Background and Strategies:

At the current levels of lane miles per full-time equivalent, the Department is not able to provide an adequate level of service. There is a long list of "deferred maintenance" work – jobs that have not been completed due to lack of personnel and other resources. Staff are required to concentrate on critical needs, such as snow removal, rock slides, flooding, and erosion of roadbeds, and are able to devote less attention to preventive maintenance, such as crack sealing, ditching, and brush cutting. Work on priority maintenance items is scheduled when time and resources permit, and federal funds are used to improve the transportation infrastructure to minimize future maintenance needs.

The Department plans to implement an Alaskan maintenance management system that will establish specific maintenance criteria (roadway surface, drainage, snow & ice control, traffic services, etc.) with defined service levels and associated cost to identify to the public and legislature meaningful performance measures. Use of the

maintenance management system will identify specific maintenance areas (e.g., guardrail repair, brush cutting, etc.) lacking in necessary resources. To reduce the average lane miles per employee, lane miles could be eliminated from state highway and aviation systems by transferring to communities, develop new funding sources, or encourage FHWA to make eligible more maintenance items under the federal aid highway program.

Measure:

The number of miles of road maintenance for which responsibility is transferred to local governments.
Sec 149(b)(3) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

In FY01 35.2 miles of road maintenance was transferred to local governments. Transferred road responsibilities include Fairbanks Trainor Gate Road, Nome City Streets, Kotzebue 3rd Avenue, Haines Porcupine Road, Juneau Point Louise Spur and 2 miles of the Glacier Highway, and in the Matanuska Susitna Borough West Matanuska Spur, Jensen Road, Church Street, 4-Mile Road, Willow Creek Parkway, Collier Road, Schelin Spur, Edgerton Park Road, Cottle Loop, Lakeview Circle, Rue Road, Crystal Lake Road, Deshka Landing Road and Willow Station Road.

Benchmark Comparisons:

No benchmark has yet been established.

Background and Strategies:

The transfer of road maintenance responsibility to local governments is negotiated between Planning, M&O and the local community. In exchange for a capital project benefiting the community, the community agrees to accept responsibility for maintaining an equivalent section of road. This is a win-win situation for the State and the community, allowing the use of federal funds to construct a project that benefits the community while reducing M&O general fund costs and responsibilities. The department is working with communities to identify roads that can be transferred to municipality control.

Measure:

Whether the department maintains the pavement condition index (PCI) at 70 for runways and 60 for taxiways and aprons at every applicable rural airport 99 percent of the time.
Sec 150(b)(1) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

Out of those runways, aprons and taxiways inspected, 48% in Central Region, 51% in Northern Region and 96% in Southeast Region have exceeded the pavement condition index identified in this measure. The actual PCI by airport is extremely variable depending upon where the airport is and when it was last upgraded. For example, the Skagway airport has recently been reconstructed and, as the paved areas are all new, PCI scores would be at or near 100. On the other hand, Yakutat has a PCI of 50 and will not be surveyed until a major reconstruction project is completed. That project will begin in 2002. All State and Municipal airports in the Northern Region have current surveys. Rehabilitation paving has taken place on the airports in Nome and Gambell since the last survey. This percentage does not reflect that work.

Benchmark Comparisons:

PCI 70 for runways; PCI 60 for taxiways and aprons.

Background and Strategies:

The PCI is a quantitative indicator of overall pavement condition that, as part of a pavement management system, helps us to determine maintenance and rehabilitation needs at airports. It also helps us to determine priorities when scheduling major pavement projects. However, a PCI score is only part of the story. The Department's goal is to maintain airports' required operational capability through effective staffing, equipment, maintenance, and management practices that ensure our airports are safe and open for business whether they have new pavement or are due for rehabilitation.

Measure:

The percentage of private maintenance contracts at non-certified airports compared to total number of non-certified airports

Sec 150(b)(3) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

70% of the Department's non-certificated airports are maintained under contract. The Department has 191 non-certificated airports. Of those, the maintenance and operations of 134 of them are contracted to private firms or individuals and the remainder are maintained by the Department.

Benchmark Comparisons:

No benchmark has yet been established.

Background and Strategies:

The current strategy is to adequately maintain all airports as cost effectively as possible. Most of the non-certified airports that are not maintained with private contractors are located next to highways. Consequently, the highway crews maintain these airports. They have all the necessary equipment and local knowledge of the airport's needs. Economy is gained by maintaining the highways and airports with existing employees and equipment. Costs to maintain airports are generally considerably higher at those not serviced by a road system. Maintenance costs will continue to be kept down through competitively bid contracts where it is cost effective to do so.

Measure:

Whether the department maintains the 100 percent pass level of annual federal airport certification inspections for response and safety standards set out in federal aviation regulations.

Sec 150(b)(4) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

100% of airports passed certification inspection. Compliance is mandatory and issues are corrected when noted.

Benchmark Comparisons:

There is no established standard or quantitative measure for FAA certification inspections. We attempt to provide the safest, most efficient service to airlines and the traveling public and ensure compliance with all appropriate regulations.

Background and Strategies:

The FAA, to ensure safe and standard airfield operations and compliance with its FAR 139 certification requirements, inspects the certificated airports at least annually. These inspections cover a broad range of areas including Airport Rescue and Firefighting (ARFF), safety, lighting, markings, runway incursions (interference with aircraft during takeoff and landing) and a number of other operating standards.

The Department's goal is to improve compliance with the FAA's FAR 139 program. This can be achieved by the proper identification of deficiencies by maintenance, operations, and safety personnel. Inspections note deficiencies for a broad range of inspection criteria and differ each year depending on FAA focus. Compliance with FAR Part 139 is achieved through adequate training and supervision of airport personnel, and implementation of effective management practices by the Regional Maintenance and Operations staff. The Regional Airport Safety and Compliance Officer is always available to help airport managers with compliance issues and ensures, through regular communication and visits, that any problems are resolved quickly.

Highways and Aviation

BRU Financial Summary by Component

All dollars in thousands

	General Funds	FY2001 Actuals Federal Funds	Other Funds	Total Funds	General Funds	FY2002 Authorized Federal Funds	Other Funds	Total Funds	General Funds	FY2003 Governor Federal Funds	Other Funds	Total Funds
<u>Formula</u>												
<u>Expenditures</u>												
None.												
<u>Non-Formula</u>												
<u>Expenditures</u>												
Central	0.0	0.0	0.0	0.0	27,485.4	1,173.1	1,705.6	30,364.1	29,517.5	1,181.4	5,723.4	36,422.3
Highways and Aviation												
Northern	0.0	0.0	0.0	0.0	36,802.6	461.5	561.1	37,825.2	39,850.9	474.2	2,078.5	42,403.6
Highways & Aviation												
Southeast	0.0	0.0	0.0	0.0	8,845.4	0.0	702.0	9,547.4	9,348.4	0.0	1,217.4	10,565.8
Highways & Aviation												
Totals	0.0	0.0	0.0	0.0	73,133.4	1,634.6	2,968.7	77,736.7	78,716.8	1,655.6	9,019.3	89,391.7

Highways and Aviation

Proposed Changes in Levels of Service for FY2003

Construction and implementation of the Road Weather Information System outside the Anchorage Bowl, use of Remote Controlled Equipment during avalanche cleanup in Thompson Pass, and Snow Plow guidance systems will increase level of service for snow and ice control.

Highways and Aviation

Summary of BRU Budget Changes by Component

From FY2002 Authorized to FY2003 Governor

All dollars in thousands

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2002 Authorized	73,133.4	1,634.6	2,968.7	77,736.7
Adjustments which will continue current level of service:				
-Central Highways and Aviation	1,158.0	8.3	-332.2	834.1
-Northern Highways & Aviation	654.4	12.7	17.4	684.5
-Southeast Highways & Aviation	154.1	0.0	15.4	169.5
Proposed budget increases:				
-Central Highways and Aviation	874.1	0.0	4,350.0	5,224.1
-Northern Highways & Aviation	2,393.9	0.0	1,500.0	3,893.9
-Southeast Highways & Aviation	348.9	0.0	500.0	848.9
FY2003 Governor	78,716.8	1,655.6	9,019.3	89,391.7